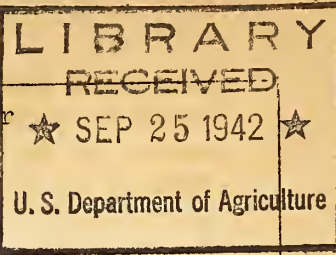


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United States Department of the Interior
Fish and Wildlife Service

Wildlife Leaflet 220

Washington, D. C. * June 1942

BLACKBIRDS AND GRAIN CROPS IN THE EASTERN UNITED STATES

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INTRODUCTION

Because of their grain-eating habits, red-winged blackbirds over much of the United States, grackles in the East and in the Mississippi River Valley, boat-tailed grackles or "jackdaws" in the Gulf coast region, and yellow-headed blackbirds locally in the Great Plains may create problems of economic importance. The damage may be inflicted in spring, when sprouting kernels attract the birds' attention; in mid-summer, when grain crops are in the milk, or "dough," stage; and at harvest, when shocked grain is subject to attack until removed from the fields.

Like most harmful activities of birds, these depredations are characteristically seasonal and local, although in areas of extensive marshes they may occur with such regularity as to constitute a perennial hazard. The same species of birds, however, sometimes the same individuals, may at other times of the year render economic services as insect destroyers and may never become pests to farmers who do not have grain crops subject to attack. Not only are there marked differences in the economic status of these birds, depending on the environment, or even on the particular farm where they may be living, but man's reactions toward them vary accordingly. There are those who sincerely

NOTE: This leaflet supersedes Leaflet Bi-908, issued in December 1926, and Wildlife Research and Management Leaflet BS-96, issued in November 1937, by the Bureau of Biological Survey, under the Department of Agriculture.

feel that combative measures are necessary; there are others, however, whose experiences justify their belief that control would be detrimental to their interests. Any proposal, therefore, for or against control is almost certain to bring forth differences of opinion.

LEGAL STATUS OF BLACKBIRDS

On June 20, 1936, the President approved an act to afford protection to additional migratory birds by extending the provisions of the Migratory Bird Treaty Act of July 3, 1918, to the treaty between the United States and the United Mexican States, signed on February 7, 1936, and ratified on March 15, 1937. Among the birds given protection are those of the family Icteridae, including orioles, meadowlarks, and blackbirds.

Since blackbirds and certain other birds, however, at times may become economically injurious to agricultural crops, the Secretary of the Interior is granted authority to issue orders permitting the killing of certain birds when they are found to be committing or about to commit serious depredations. On February 13, 1942, the Secretary of the Interior issued three orders relating to the control of blackbirds and other depredating migratory birds. One¹ of these, pertaining to California only, authorizes the agricultural commissioner of any county in that State to kill or to have killed under his general supervision and direction red-winged, yellow-headed, and Brewer's blackbirds and some other species of birds when found to be economically injurious to agricultural or horticultural crops. A second order² permits the owner or the custodian of any agricultural crop or of ornamental or shade trees in any State except California to shoot certain blackbirds and boat-tailed grackles when found committing or about to commit serious depredations upon such crops or trees owned by him or in his custody. Poison operations cannot be conducted under this order. The third order³ authorizes the Director of the Fish and Wildlife Service, or when authorized by him, the regional directors of the Service, to issue permits to kill certain depredating migratory birds, including blackbirds, when they are found to be committing or about to commit injury to agricultural crops or other interests in any State. These latter permits, which must be countersigned by the chief game official, or by his authorized representative, of the State in which the permit is operative (unless the applicant already has a permit signed by such official), are nontransferable, restrict the privileges granted to the premises specified, prescribe methods of shooting and the disposition of the birds killed, and require the reporting of the number and the species of birds killed.

¹/Supersedes order of the Secretary of Agriculture issued June 5, 1937.

²/Supersedes order of the Secretary of Agriculture issued November 17, 1937.

³/Supersedes order of the Secretary of Agriculture issued June 10, 1938.

It will be noted that the first and third of these orders involve the granting of permits by county agricultural commissioners in California and by officials of the Fish and Wildlife Service, respectively. The second order is of a blanket nature and authorizes the crop owner or custodian, without obtaining a permit, to shoot blackbirds found injuring or about to injure his crops. There are, however, certain restrictions imposed on those who avail themselves of this privilege, including prohibition of the sale of birds so killed, the right of Federal or State law-enforcement officers to inspect the premises on which the killing is being or has been done, the necessity to abide by State law or regulation with respect to shooting the birds, and the requirement to submit annually a report of operations to the Director of the Fish and Wildlife Service. The complete text of the three orders governing the control of injurious species may be obtained from the Fish and Wildlife Service, Washington, D. C.

CONTROL

Shooting or Other Frightening Measures

In areas where damage by blackbirds is an annual occurrence, shooting often is looked upon as a practice necessary for production of a crop. This is particularly true in the extensive rice-growing region of the Gulf coast. In this area the large rice-growing companies advance ammunition to their tenant farmers just as they do seed and fertilizer. Cheap black-powder shells and 12-gage, double-barrel or repeating shotguns are usually employed in the patrol work.

The efficiency of shooting as a means of protecting a rice crop is demonstrated by the experience of a Louisiana farmer. To protect 230 acres, from which he harvested 2,600 sacks of rice, he expended \$135 for 4,500 shells, \$35 for a gun that burned out, and an unstated amount for labor--possibly a total of \$250. Judging from previous experience he estimated that if his fields had not been patrolled his crop would not have exceeded 1,000 sacks. Thus by spending \$250 in protecting his crop he saved 1,600 sacks of rice, which at prices current at the time were worth more than \$7,800. Stated differently, the cost of protection represented an outlay equal to about 2 percent of the value of the entire crop.

In large fields distant from human habitations and livestock, a rifle may be used in place of the shotgun with increased economy and efficiency. This procedure, by no means new to rice growers in California, has been neglected in the rice fields of the Gulf coast. For safety and convenience in reaching all parts of the field, a shooting tower 15 to 20 feet high, built of scantlings, may be erected near the center of the area to be protected. From this vantage the bird minder can see where he is shooting and can direct his shots downward into the vegetation of the rice field. By using 22-caliber, long-rifle cartridges in place of shotgun ammunition, the cost of protection can be reduced to about one-fifth. The longer range of the

rifle enables a person to control a larger area, and thus the expenditures for labor are reduced to about one-fourth of that ordinarily required when the shotgun is used. Furthermore, blackbirds respond more readily to the impact of a rifle ball than to bird shot and are more inclined to leave the fields after a shot or two. By this means, flocks of blackbirds numbering into the hundreds have been driven from stands of rice at distances of 800 yards, and bird minding is changed from an exhausting, nerve-racking, and often hopeless occupation to one that under some conditions might be considered leisurely and comfortable. It must be emphasized, however, that rifle fire can safely be resorted to only in large fields away from human habitations and farm animals. In thickly settled areas protecting crops by gunfire is increasingly more difficult as the fields become smaller and people and livestock more numerous. As most incorporated towns forbid all shooting within their limits, gunfire should not be resorted to until local regulations have been consulted.

Less drastic frightening measures, including noise-producing devices and scarecrows, are, at best, of doubtful utility when blackbirds are present in large flocks and intent on feeding on standing or shocked grain. When hand-operated they are time-consuming, and if farm duties have placed a premium on available labor, they are impracticable. When cheap labor is available, a little alert bird minding, even with simple and harmless devices, may result in worthwhile savings. Since everything from pounding dishpans to cracking whips has been used, and since human ingenuity and perseverance play an important part in the creation and success of such contrivances, the age-old practices of frightening birds by whatever means is at hand need no detailed discussion here.

Poisoning

Although poison has been used effectively in reducing blackbird flocks locally, particularly in California where provision has been made for its exposure under close supervision of officials of the State Department of Agriculture, its use by the general public is not recommended because of the hazards and uncertainties connected with it. Not only may poisoned bait, carelessly exposed, jeopardize beneficial wild birds, domestic poultry, and livestock, but inexperience in its use and unfamiliarity with blackbird habits would certainly result in wasteful exposure. Without a thorough knowledge of the local movements and feeding habits of the blackbirds, attempts at controlling them by poisoning are likely to be highly uneconomical and the kill to be surprisingly low. This is particularly true at the time of the ripening and harvesting of the grain when there is a great abundance of wholesome food available, and poisoned baits do not have marked attractiveness for wandering flocks. These recommendations against poisoning are made despite the fact that at times of acute damage poison operations, when conducted by experienced individuals, frequently deter flocks from further depredations by the killing of a few individuals.

AVOIDING DAMAGE THROUGH CHANGES IN AGRICULTURAL PRACTICES

Sometimes it is possible to avoid serious damage by blackbirds through changes in agricultural practices. In southwestern Louisiana no flocks large enough to inflict serious damage appear before the first of September when all the Early Prolific rice has passed beyond the milk and dough stages and most of it has been shocked. In some years the threshing and hauling to the mills of this strain of rice are well under way early in August. It is evident, therefore, that this or any other equally early strain of rice will escape serious blackbird damage when in the milk and dough stages. Although because of several economic factors only a small proportion of the total rice acreage can profitably be planted to early strains, the advantages accruing from the practice suggest the desirability of planting early varieties in fields most vulnerable to blackbird attack.

Experimentation also has shown that late varieties, which can hardly escape damage during the ripening and harvesting periods, may be given added protection during the sprouting season by delay in planting. In Louisiana little is gained culturally by seeding the late-maturing varieties as early as February or March when the droves of blackbirds have not yet scattered for the nesting season. By planting after the middle of April much of the early damage is avoided and there will be no greater disadvantage at the harvest.

It is realized that the harvesting of such other crops as Indian corn and late-maturing sorghums frequently cannot be manipulated so as to avoid blackbird damage in many parts of this country. There are advantages, however, to be gained, particularly where blackbirds are congregated locally, in not planting vulnerable crops on land adjacent to marsh areas. Where these marsh areas are extensive, and destructive flocks of blackbirds travel for miles to feed on them, there is good reason, in view of the seemingly hopeless task of battling the flocks perennially, to consider even a change in the crops being raised. This suggestion may convey the idea of a surrender without battle, yet when the costs, uncertainties, and hazards of some forms of blackbird control are considered, a policy of avoidance may be not only the cheapest but the most effective remedy.

